

April 20, 2022

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, South Carolina 29210

In Re: Annual Review of Base Rates for Fuel Costs for Dominion Energy South
Carolina, Incorporated (For Potential Increase of Decrease in Fuel Adjustment)
Docket No. 2022-2-E

Dear Ms. Boyd:

On behalf of the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy, please find attached for electronic filing in the above-referenced docket a *Partial Proposed Order*. Please contact me if you have any questions regarding this filing.

Sincerely,

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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2022-2-E

Annual Review of Base Rates for Fuel)	<u>PARTIAL PROPOSED ORDER OF</u>
Costs for Dominion Energy South)	<u>THE SOUTH CAROLINA COASTAL</u>
Carolina, Incorporated (For Potential)	<u>CONSERVATION LEAGUE AND</u>
Increase or Decrease in Fuel)	<u>SOUTHERN ALLIANCE FOR CLEAN</u>
Adjustment or Gas Adjustment))	<u>ENERGY</u>
)	

COME NOW Intervenor the South Carolina Coastal Conservation League (“CCL”) and Southern Alliance for Clean Energy (“SACE”) (collectively, “CCL/SACE”) hereby file this Partial Proposed Order.

I. INTRODUCTION

This matter comes before the Public Service Commission of South Carolina (“Commission”) on the annual review of the fuel purchasing practices and policies of Dominion Energy South Carolina, Inc. (“DESC” or “Company”) and for a determination as to whether any adjustment in the fuel cost recovery factors is necessary and reasonable. The procedure followed by the Commission in this proceeding is set forth in S.C. Code Ann. § 58-27-865 (2015). Additionally, pursuant to S.C. Code Ann. § 58-39-140 (2015), as enacted in Act 236, the Commission must determine in this proceeding whether an increase or decrease should be granted in the fuel cost component designed to recover the incremental and avoided costs incurred by the Company to implement the Distributed Energy Resource (“DER”) program previously approved by the Commission.

The Company seeks approval for its proposed 2022 update to calculations under the Net Energy Metering (“NEM”) Methodology approved in Commission Order No. 2015-194. Under the NEM Methodology, utilities must determine the net value—i.e., the net benefits—of NEM generation (the “value of solar”) to determine the amount of under- or over-recovered revenue from net metering customers. In the case of under-recovered revenue, utilities may recover the difference, referred to as the “DER NEM Incentive,” from all customers (though subject to certain statutory caps) so that they may continue to offer net metering customers the 1:1 Rate for gross production.

The Energy Freedom Act of 2019 (“Act 62”) established additional requirements regarding the costs and benefits of NEM and directed the Commission to open a generic docket to “investigate and determine the costs and benefits of the current net energy

metering program” and “establish a methodology for calculating the value of the energy produced by customer-generators.” S.C. Code Ann. § 58-40-20(C). Accordingly, the Commission issued a decision in the generic NEM docket (Docket No. 2019-182-E) on August 19, 2021, updating the methodology for calculating the value of distributed solar. In that Order, Commission Order No. 2021-569, the Commission approved continued use of the NEM Methodology set out in Order No. 2015-194 with several key modifications to account more fully for the value of distributed solar. The Commission directed utilities to implement the updated methodology to determine the NEM Incentive in future fuel proceedings.

A. Notice

By letter dated October 13, 2021, the Commission’s Clerk’s Office instructed DESC to publish by November 19, 2021, a Notice of Hearing and Prefile Testimony Deadlines (“Notice”) in newspapers of general circulation in the area affected by the Commission’s annual review of DESC’s fuel purchasing practices and policies. The Clerk’s Office also instructed DESC to furnish the Notice to its customers by November 19, 2021, by U.S. Mail via bill inserts or electronically to its customers who have agreed to receive notice by electronic mail and to provide a certification to the Commission on or before December 3, 2021, that this notification has been furnished. On December 1, 2021, DESC filed affidavits with the Commission demonstrating the Notice was duly published in newspapers of general circulation and Notice was furnished to its customers in accordance with the instructions set forth in the Clerk’s Office’s October 13, 2021, letter.

B. Intervenor

Petitions to Intervene were received from the South Carolina Energy Users Committee (“SCEUC”), CMC Steel South Carolina (“CMC Steel”), and the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy (“CCL/SACE”). Pursuant to S.C. Code Ann. § 37-6-604(C) (2015 & Supp. 2019), the South Carolina Department of Consumer Affairs (“Consumer Affairs”) was provided notice of this Docket which could impact consumers’ utility rates but did not intervene. The Petitions to Intervene of SCEUC, CMC Steel, and CCL/SACE were not opposed by DESC, and no other parties sought to intervene in this proceeding. The South Carolina Office of Regulatory Staff (“ORS”) is automatically a party pursuant to S.C. Code Ann. § 58-4-10(B).

C. Hearing

The Commission convened a hearing on this matter on April 7, 2022, with the Honorable Justin T. Williams, Chairman, presiding. The Hearing was noticed as a virtual hearing by the Clerk’s notice dated October 13, 2021, but several parties chose to appear in person. DESC was represented by K. Chad Burgess, Esquire, Matthew W. Gissendanner, Esquire, Michael Anzelmo, Esquire, and Jason R. Richardson, Esquire, appearing in person. SCEUC was presented by Scott Elliott, Esquire, appearing in person. CCL and SACE were represented by Kate Lee Mixson, Esquire, and Emma Clancy, Esquire, appearing virtually. ORS was represented by Alexander Knowles, Esquire, Nicole Hair, Esquire, appearing in person. By email dated April 5, 2022, CMC Steel requested to be excused from appearing at the hearing, and the Hearing Officer David Butler granted this request on April 7, 2022.

At the hearing, DESC presented the direct testimony of Tom Brookmire, George Lippard, Rose M. Jackson, Michael D. Shinn, Mark Furtick, Allen Rooks and the direct and rebuttal testimony of James W. Neely in four in-person witness panels. ORS presented the direct testimony of Michael Seaman-Huynh, Brandon S. Bickley, Gretchen Pool, and Anthony D. Briseno in two in-person witness panels. CCL/SACE presented the direct testimony of R. Thomas Beach virtually. SCEUC did not present witnesses at the hearing. CCL/SACE Witness Beach was qualified as an expert witness in issues related to net energy metering and distributed energy resources, including rate design, avoided cost issues, and calculating the costs and benefits of distributed solar generation and distributed energy resources.

II. STATUTORY STANDARDS AND REQUIRED FINDINGS

S.C. Code Ann. § 58-27-865(B) (2015) states in pertinent part that,

[u]pon conducting public hearings in accordance with law, the [C]ommission shall direct each company to place in effect in its base rate an amount designed to recover, during the succeeding twelve months, the fuel costs determined by the [C]ommission to be appropriate for that period, adjusted for the over-recovery or under-recovery from the preceding twelve-month period.

S.C. Code Ann. § 58-27-865(F) further directs the Commission to disallow recovery of any fuel costs that it finds without just cause to be the result of failure of the utility to make every reasonable effort to minimize fuel costs or any decision of the utility resulting in unreasonable fuel costs.

In addition to fuel costs, S.C. Code Ann. § 58-39-140 (2015) permits recovery of the incremental and avoided costs incurred by the Company to implement the DER program, referred to as the “DER Incentive,” as determined by the Commission in annual

fuel proceedings. Through the Incentive, the Company may recover costs associated with customer-generators who applied prior to June 1, 2021. S.C. Code Ann. § 58-40-20(B).

To calculate the NEM portion of the DER Incentive utilities must determine the net value—i.e., the net benefits—of NEM generation (the “value of solar”) using the NEM Methodology approved in Commission Order No. 2015-194. In the case of under-recovered revenue, utilities may recover the difference, referred to as the “DER NEM Incentive,” from all customers (though subject to certain statutory caps) so that they may continue to offer net metering customers the 1:1 Rate for gross production. Thus, under this calculation there is an inverse relationship between the net benefits of DERs and the DER NEM Incentive the utility collects from ratepayers. As the value of distributed solar *increases*, the DER NEM Incentive, and its impact on the fuel rider and customer bills, *decreases*. In other words, if the company is required to more fully account for the value of distributed solar, there is a direct downward pressure on rates through a reduction in the fuel clause rider.

The NEM methodology set out in Order No. 2015-194 quantifies the net benefits delivered by DERs using a “value stack” of costs that the utility will avoid (or, in a few instances, incur) due to the distributed solar on its system. These components include:

1. Avoided Energy
2. Energy Losses/Line Losses
3. Avoided Generation Capacity
4. Ancillary Services
5. Transmission and Distribution Capacity
6. Avoided Criteria Pollutants
7. Avoided Carbon Dioxide (CO₂) Emission Costs
8. Fuel Hedge
9. Utility Integration & Interconnection Costs
10. Utility Administration Costs
11. Environmental Costs

In 2019, Act 62 established additional requirements regarding the costs and benefits of NEM in furtherance of the General Assembly's stated intent to "build upon the successful deployment of solar generating capacity through Act 236 of 2014," S.C. Code Ann. § 58-40-20(A)(1), (2), and "ensure that the revenue recovery, cost allocation, and rate design of utilities that it regulates are just and reasonable and *properly reflect* changes in the industry as a whole, *the benefits of customer renewable energy*, energy efficiency, and demand response." S.C. Code Ann. § 58-41-05 (2019).

In pursuit of these goals, Act 62 required the Commission to open a generic docket by January 1, 2020, to "investigate and determine the costs and benefits of the current net energy metering program" and likewise to "establish a methodology for calculating the value of the energy produced by customer-generators." S.C. Code Ann. § 58-40-20(C). In evaluating the costs and benefits of the NEM program, the Commission was required to consider:

- (1) the aggregate impact of customer-generators on the electrical utility's long-run marginal costs of generation, distribution, and transmission;
- (2) the cost of service implications of customer-generators on other customers within the same class, including an evaluation of whether customer-generators provide an adequate rate of return to the electrical utility compared to the otherwise applicable rate class when, for analytical purposes only, examined as a separate class within a cost of service study;
- (3) *the value of distributed energy resource generation according to the methodology approved by the commission in Commission Order No. 2015-194;*
- (4) the direct and indirect economic impact of the net energy metering program to the State; and
- (5) any other information the commission deems relevant.

S.C. Code Ann. § 58-40-20(D) (emphasis added).

As required, the Commission opened the generic NEM docket, Docket No. 2019-182-E, and after hearing extensive testimony, issued Order No. 2021-569. In that Order, the Commission endorsed the continued use of the 2015 methodology with key modifications. First, the Commission clarified its expectations for the value of solar calculation, stating its requirement that “electrical utilities to use *best efforts* and *best practices* to *populate* each category or value in the Order No. 2015-194 methodology, as modified here, in all future proceedings where this analytical framework is utilized.” Order No. 2021-569 at 34 (emphasis added). Should a utility continue to use a zero value in the value stack, the “Commission adopt[ed] a standard [] that electrical utilities in utilizing the Order No. 2015-14 valuation methodology *bear the burden of showing why a zero value is justified* and *why it is not practical or feasible to provide the analysis required.*” *Id.* (emphasis added). In addition, the Commission required solar benefits to be evaluated over a twenty-year expected useful life and articulated specific methodological requirements for components in the value stack. Order No. 2021-569 at 9, 11-14.

The Commission’s review of the Company’s value of solar in this proceeding will be based on the Company’s compliance with the standards and requirements set forth in Order No. 2021-569, which governs utilities’ valuation of solar in annual fuel cost proceedings. *See S.C. Cable Television Ass’n v. Southern Bell Tel. And Tel. Co.*, 417 S.E.2d 586, 588 (“Orders issued under the powers and authority vested in the PSC have the force and effect of law.”); *see also Daufuskie Island Util. Co. v. S.C. Office of Regul. Staff*, 832 S.E.2d 572, 574-75 (S.C. 2019) (the Commission must “evaluate the evidence in accordance in objective and consistent standards” and its decisions are arbitrary if made “without adequate determining principles, or governed by no fixed rules or standards”).

III. FINDINGS OF FACT

DESC's Proposed Value of Solar

1. DESC's total value of solar in the Current Period and 20-Year Levelized Period underestimates the benefits that rooftop solar provides to the utility's system. As a result, the Company's calculation of the NEM portion of the DER incentive is inflated and would result in over recovery through the DER NEM Incentive if approved.
2. DESC did not use "best efforts" or "best practices" to populate each category or value in the Order No. 2015-194 methodology. Rather, DESC has unreasonably set zero values for several components of the value stack, including avoided transmission and distribution and fuel hedge. Even where DESC has assigned values to component in the value stack, it has employed unreasonable methodologies that do not comply with Order No. 2021-569 and tend to result in an underestimation of distributed solar benefits.

Components of the NEM Methodology

3. *Avoided Energy*: DESC has not demonstrated that its calculation of avoided energy accounts for the seasonal and temporal (e.g., on-peak period value) variations in avoided energy costs. As a result, DESC has failed to comply with Order No. 2021-569's methodological requirement for avoided energy. It is reasonable to require that DESC recalculate its avoided energy component using the seasonal and temporal variations in avoided energy costs from the time-of-use periods approved in its 2021 avoided cost proceeding (Docket No. 2021-88-E) for the technology neutral PR-1 and Standard Offer rates.

4. *Energy Losses/Line Losses*: Consistent with Order No. 2021-569, DESC used marginal line losses associated with customer-generator to calculate distribution losses. However, DESC improperly assumed that average transmission losses are representative of marginal transmission losses, when generally marginal losses are at least 50% *greater* than average losses, and as a result set underestimated the value of the Energy Losses/Line Losses component. Until more granular data is available, it is reasonable to require DESC to modify its approach to estimate energy losses/lines losses in the manner set out in CCL/SACE Witness Beach's direct testimony.
5. *Avoided Generation Capacity*: DESC has underestimated the avoided generation capacity benefit of distributed solar by giving undue preference to utility scale solar and failing to account for near-term capacity needs caused by the Company's imminent retirement of aging combustion turbine units, as outlined in its combustion turbine replacement plan. In addition, it is unclear based on the evidence presented in the prefiled testimony and at the hearing whether DESC used the methodology set out in Order No. 2021-569 to calculate solar capacity contribution. In contrast, CCL/SACE Witness Beach's proposed alternative avoided capacity value reasonably accounts for DESC's near-term capacity needs and the contribution to the Company's peak loads by customer-generators who applied prior to June 1, 2021.
6. *Avoided Transmission & Distribution Capacity*: DESC did not use best efforts or best practices to populate the avoided transmission and distribution ("T&D") capacity value for the Current Period and thus failed to meet its burden to justify

the proposed zero value. With respect to the 20-year avoided T&D capacity value, while DESC estimated a value for this component, we are concerned based on the testimony presented by CCL/SACE Witness Beach that the Company has arbitrarily segmented capacity-related T&D costs from other T&D expenditures and taken an overly narrow view that avoided T&D costs can occur only if there is forecasted load growth. In contrast, Witness Beach's proposed alternative T&D value for Current and 20-year Period is supported with an in-depth methodological explanation and was calculated using the industry-accepted National Economic Research Associates regression method.

7. *Avoided CO₂ Emissions*: The Commission is persuaded by testimony in this proceeding that the Company is currently spending money to meet its corporate emissions target to reduce carbon emissions by half by 2020. The Company has proposed a zero value in this proceeding due to a lack of state or federal regulation of carbon, but in future proceedings, the Company should attempt to quantify the extent to which solar PV displaces or reduces its need to expend resources in furtherance of its corporate carbon goal.
8. *Fuel Hedge*: Distributed solar reduces a utility's use of natural gas over solar PV's 20-year economic life, and thus decreases the exposure of ratepayers to the volatility and periodic spikes in natural gas. Ratepayers thus realize a significant "fuel hedge" value to any deployment on the DESC system of renewable resources that have zero fuel costs, and it is unreasonable of DESC to continue to assign this component a zero value merely because the Company does not engage in financial hedging. CCL/SACE Witness Beach proposes a reasonable alternative value that

accounts for the benefits that the Company's solar customers provide by reducing ratepayers' exposure to fuel cost volatility and which reasonably reflects the significant long term fuel hedge value that solar provides to DESC ratepayers.

9. *Utility Integration & Interconnection Costs*: In calculating the value of solar, it is reasonable for the Company to apply the integration charge approved in its last avoided cost proceeding to only the power that is exported by customer-generators.

IV. **REVIEW OF EVIDENCE AND COMMISSION CONCLUSIONS**

A. **DESC's Proposed Value of Solar (Findings of Fact Nos. 1 through 2)**

Summary of Evidence

DESC Witness James W. Neely presented the Company's proposed value of solar in his direct testimony, as well as the calculation of the individual components. In total, DESC proposed a value of solar of \$0.03093/kWh for the Current Period and \$0.04248/kWh for 20-year Levelized value. (Tr. at 145.8.) In the Current Period DESC used a zero value for Avoided Generation Capacity, Ancillary Services, Avoided CO₂ Emission Cost, Fuel Hedge, and Utility Administration Costs. *Id.* Witness Neely acknowledged at the hearing that the Company was proposing in the Current Period to use a zero value for the same number of components (six) as in last year's proceeding, prior to the publication of Order No. 2021-569. (Tr. at 157:2-19.) For the long-term value, the Company proposed to populate just one additional zero value when compared to last year's long-term calculation. (*Compare* Tr. at 145.7 (Table 1) *with* Tr. at 145.8 (Table 2).)

CCL/SACE Witness R. Thomas Beach submitted direct testimony critiquing DESC's proposed values for avoided energy, energy losses/line loss, avoided generation capacity costs, avoided transmission and distribution ("T&D"), fuel hedge, avoided carbon

emissions, and integration cost. Overall, he found that DESC had significantly understated the value of solar. (Tr. at 302.7.) As discussed in more detail below, Witness Beach proposed alternative approaches, as well as specific recalculated values, for several components to more fully account for the value of solar in DESC's calculation of the DER NEM Incentive and comply with new requirements in Order No. 2021-569. (Tr. at 302.5–302.6.) Witness Beach highlighted the inverse relationship between the net benefits of solar and the DER NEM Incentive the utility collects from ratepayers, noting that it was critically important to ensure that the benefits of DERS are accurately and fully accounted for to ensure ratepayers are not overpaying or subsidizing the utility on the basis of incorrect solar valuation. (Tr. at 302.8.)

In response to questioning from Commissioner Thomas, Witness Neely improperly suggested that assigning a greater value to solar under the NEM methodology as Witness Beach recommended would benefit solar customers while increasing bills for the Company's non-solar customers. (Tr. at 239–40.) However, DESC Witness Rooks corrected Witness Neely's assertion and clarified that Witness Beach's recommendation would decrease the NEM incentive and could reduce customers' bills. (Tr. at 269:6-25.) Witness Rooks explained that “[i]f the value of solar [] is set lower, then the incentive would be higher and customers would pay more in incentive,” whereas “[i]f it's set higher, the customers would pay less in incentive.” (Tr. at 270:25–271:3.) In fact, Witness Rooks testified that if the value of solar was increased to the same amount as the Company's retail rate, “the NEM incentive line item...would decline substantially,” (Tr. at 271:9-17.)

In response to questioning from Vice Chair Belser, Witness Rooks added that while he could not say for certain that a greater value of solar would reduce customer bills

immediately because the DER incentive currently exceeded the statutory cap of twelve dollars per year, the NEM incentive and NEM future benefits, which the Company is currently expected to recover through 2040, would go down. (Tr. at 272–73; 274:11 – 275:13.)

Commission Conclusions

Act 62 directed the Commission to “fairly evaluate the costs and benefits of customer-generated resources” and to, specifically, establish a methodology that accounts for the aggregate impact of customer-generators on the electrical utility’s long-run marginal costs of generation, distribution, and transmission.” To fulfill that statutory directive, the Commission opened Docket No. 2019-182-E, where numerous parties (including some of those appearing in this docket) filed extensive testimony, culminating in a three-day evidentiary hearing. The result of those efforts was Order No. 2021-569, where the Commission set expectations for a thorough, industry-standard valuation of distributed solar and provided utilities with specific direction as how to calculate certain key benefits of distributed solar, including avoided energy, avoided capacity, avoided T&D, and avoided line losses.

DESC’s proposed value of solar in this proceeding does not comply with the directive in Order No. 2021-569. As discussed in greater detail below, DESC disregarded the Order’s explicit methodological requirements for components in the value stack and instead used the same outdated and overly simplistic calculations it has employed in the past, even where more advanced approaches are readily available that would comply with Order No. 2021-569; indeed, DESC acknowledged at the hearing that it did not evaluate any alternative approaches, let alone which would be “best practice.” For this reason, we

require DESC to revise the proposed DER NEM Incentive using Witness Beach's recommended alternative values for certain components in the value stack.

The value of solar calculation is not an academic or theoretical exercise; it has a direct bearing on the amount DESC recovers from customers through the fuel rider. As Witness Rooks explained, because the DER NEM Incentive passed to customers equals the difference between the retail rate (the amount customers-generators receive for exports) and the value of the solar, a lower value of solar will result in a *greater* DER NEM Incentive. The Commission urges the parties to not lose sight of the concrete rate impacts of the value of solar calculation and notes that the incremental costs recovered from residential customers will never fall below the \$1 per month cap if distributed solar continues to be undervalued. Moreover, persistent undervaluation may delay full cost recovery, causing the utility to pass DER costs that have exceeded the cap in past years through the fuel rider to customers for longer than is appropriate.

We would further note that S.C. Code Ann. 58-40-20(A)(3), as established under Act 62, requires the Commission to "establish solar choice metering requirements that fairly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent practicable." While section (A)(3) is part of Act 62's requirements for new solar choice tariffs, which are not at issue in this fuel docket, the Commission notes that correcting the value of solar will reduce the amount collected from all ratepayers through the NEM DER Incentive. Indeed, CCL/SACE Witness Beach's recommendations are the only ones offered in this proceeding that have the potential to mitigate the Company's proposed increase to the fuel rider.

B. Components of the NEM Methodology (Findings of Fact 3-9)

1. Avoided Energy

Summary of Evidence

DESC Witness Neely testified that the avoided energy costs were based on the PURPA avoided cost values previously approved by the Commission. (Tr. at 145.5, 145.8) However, CCL/SACE Witness Beach observed that the Company's proposed avoided energy costs did not "include calculation of the seasonal and temporal (e.g., on-peak period value) variations in avoided energy cost" as required by Order No. 2021-569. (Tr. at 302.11 (citing Order No. 2021-569 at 36).) Witness Beach found this surprising because DESC is capable of calculating these hourly marginal costs using its PLEXOS modeling software. *Id.* In addition, the Commission recently approved avoided energy rate schedules based on eleven seasonal and time-of-use periods in DESC's 2021 avoided cost proceeding; DESC could easily apply those seasonal and time-differentiated rates to a typical solar profile as a straightforward means to comply with the avoided energy directive in Order No. 2021-569. (Tr. at 302.12.)

Witness Neely asserted in rebuttal that the Company had delayed implementing the seasonal and time-differentiation periods for avoided energy so that it could be synced with the results of an ongoing study to determine the temporal and seasonal periods for avoided T&D capacity. (Tr. at 153.3:14–153.4:4.) Witness Neely did not explain why syncing this data for avoided energy and avoided T&D justified delaying compliance with Order No. 2021-569, nor did he address why the TOU periods from the avoided cost proceeding could not be used in the interim. Witness Neely suggested at the hearing that analyzing TOU periods for this value would not have made a difference to the final value; specifically, he

stated that even if the Company looked at the approved TOU periods to determine this value “then combined them back together [] to put in this table, it would be exactly the same number we put in the table.” (Tr. at 222:15–223:3.) However, this explanation was in clear conflict with Witness Neely’s rebuttal testimony stating that the Company delayed implementing temporal and seasonal data in its avoided energy calculation. (Tr. at 147:17-25; 153.3:19–153.4:4.)

Commission Conclusions

The Commission is persuaded by Witness Beach’s testimony that DESC did not account for the seasonal and temporal (e.g., on-peak period value) variations in avoided energy cost when calculating its avoided energy value and thus failed to comply with Order No. 2021-569. As demonstrated in the Company’s 2021 avoided cost proceeding (Docket No. 2021-88-E), DESC is capable of accounting for seasonal and temporal variations in avoided energy cost through its PLEXOS modeling software and the Commission has approved avoided energy rate schedules for DESC based on eleven seasonal and time-of-use periods. It is therefore appropriate to require DESC to recalculate the avoided energy component in the manner recommended by Witness Beach.

At the hearing Witness Neely suggested that applying the required approach would not have made a difference to the proposed avoided energy value. However, this argument was not put forth in pre-filed testimony and its basis is unclear. If considering seasonal and temporal variations would not have resulted in a more accurate avoided energy component, the Commission would not have issued this directive in Order No. 2021-569. Indeed, it was DESC’s own witness in that proceeding who testified that “further delineating Avoided Energy Costs by season and time of use periods and then applying the actual

energy produced during those same designated season and time of day periods would better represent the value of customers-generation.” Order No. 2021-569 at 35.

2. *Energy Losses/Line Losses*

Summary of Evidence

For the line loss component, DESC Witness Neely noted that Order No. 2021-569 modified the existing methodology to require utilities to determine marginal line losses associated with customer-generators or, if such data does not exist, to develop a near term plan to acquire the data. DESC proposes to continue its current approach to derive losses on its T&D system but expects the granularity and accuracy of its data to improve. (Tr. at 145.16–145.17.)

CCL/SACE Witness Beach agreed conceptually with Witness Neely but expressed concern that the Company was not in fact using marginal losses as required in Order No. 2021-569. For example, Witness Beach testified that DESC assumed that average transmission losses are representative of marginal transmission losses, when generally marginal losses are at least 50% *greater* than average losses; for distribution, the Company did appear to assume that marginal distribution losses are two times average losses. In addition, DESC applied its line loss adjustment to all components of the value of solar, when it should apply only to the energy- and capacity-related value components; this tends to overstate the adjustment. Witness Beach recommended that DESC revise its calculation by 1) assuming that both marginal transmission and distribution losses are 50% higher than average losses; 2) applying energy losses to avoided energy and fuel hedge costs; and 3) applying both transmission and distribution capacity losses to avoided generation and

transmission capacity costs but apply only avoided distribution capacity losses to avoided distribution capacity costs.

Commission Conclusions

The Commission is persuaded by Witness Beach's testimony that marginal losses are generally at least 50% greater than average losses, and thus DESC's assumption that average transmission losses are representative of marginal transmission losses was improper. As a result, DESC underestimated the value of the Energy Losses/Line Losses component. This approach is inconsistent with Order No. 2021-569's requirement that utilities determine marginal line losses associated with customer-generator facilities. Order No. 2021-569 at 46. Until more granular data is available, DESC shall modify its approach to estimate energy losses/lines losses in the manner set out in Witness Beach's direct testimony to reduce the underestimation of this value in the interim.

3. *Avoided Generation Capacity*

Summary of Evidence

DESC's proposed avoided capacity cost is set at zero for the Current Period and \$0.00034/Kwh for the 20-year Period. (Tr. at 145.9:5-8.) DESC Witness Neely claimed that the Company does not have any near-term capacity needs and that the long-term capacity costs are based on the Company's plans to retire 1294 MW of coal in 2028. To derive the solar capacity contribution of 3.423%, Witness Neely explained that the Company used the approach set out in Order No. 2021-569 to "estimate the hourly usage profile of a customer-generator using historic usage profiles and estimating the net hourly usage profile of these customers by applying the aggregate generation profile." (Tr. at 145.9:20–145.10:5.) However, this portion of Order No. 2021-569 addressed the

methodology utilities should use to conduct a cost-of-service study for customer-generators, rather than how to calculate avoided capacity. *See* Order No. 2021-569 at 10-11.

CCL/SACE Witness Beach critiqued two aspects of DESC's capacity calculation. First, he disagreed with the assumption that DESC's first capacity need was not until 2028 based on the Company's plans in its 2021 IRP Update to replace aging units with new combustion turbines ("CTs") as early as 2023. (Tr. at 302.19:1-12.) Witness Beach explained that regardless of whether the need for new units was caused by load growth or aging units, the plans reflected a current capacity need on the Company's system.

Second, Witness Beach observed that the Company's capacity contribution was not calculated in compliance with Order No. 2021-569, which required that "forecasts of [avoided] capacity costs *take into consideration the hours in which utility loads are likely to peak and when generation is most needed.*" (Tr. at 302.13:16–302.14:17.) In contrast, the methodology used by the Company did not fully reflect the difference between solar's capacity contribution on a spring day when peak demand is lower versus a hot summer day when demand is much higher. *Id.* Witness Beach also observed that DESC's capacity contribution calculation gave undue preference to the capacity contribution of utility-scale solar over distributed solar, and in effect assumes that utility-scale solar was deployed first even though both utility-scale and distributed solar have been deployed simultaneously over the years. (Tr. at 302.14:3-6.)

Witness Beach proposed revised avoided capacity values for the Current and 20-year Period in recognition of the Company's immediate capacity need beginning in 2023 and in accordance with the approved methodology. Specifically, he recalculated the

capacity contribution by looking at solar output only in the top 10% of hours when DESC experiences its highest loads, used 15 years of historical hourly DESC loads to capture summer and winter peaks, and accounted for the solar on DESC's system by looking at the highest loads net of the solar resources on the Company's system. (Tr. at 302.14:17–302.17:16.) Witness Beach's methodology is the same approach that was adopted in Docket No. 2019-182-E but applied to 15 years of historical data. (Tr. at 302.14:17-20.) Ultimately, Witness Beach recommended that 26.5% of a solar PV project's capacity be assumed to contribute to meeting DESC's capacity needs in its peak load hours. (Tr. at 302.17:15-16.) Witness Beach further explained why this value was so much higher than the ELCC used in the Company's IRP; while the ELCC is intended to calculate the value of solar resources added in the *future*, the avoided capacity value in this NEM Methodology captures the capacity contribution of the *existing* fleet of distributed solar resources that came online prior to June 1, 2021. (Tr. at 302.18:8-19.)

In rebuttal, Witness Neely asserted that the Company's near-term CT replacement should not impact the avoided capacity contribution because the new units are "in kind" replacements not intended to provide additional capacity and will provide functions that solar generators cannot provide. (Tr. at 153.5:17–153.6:2.) But at the hearing Witness Neely agreed with the statement that "as with the company's planned coal retirement, [] the replacement of these aging combustion-turbine units is necessary to prevent the company's system capacity from dropping below what it needs to provide reliable service," and, as a result, "these replacements are intended to serve a capacity need on the [] company's system." (Tr. at 198:14-19.) Witness Neely further acknowledged that, per the

Company's 2021 IRP update, DESC is ready to "immediately" replace these aging units. (Tr. at 200:2-10.)

Regarding solar capacity contribution, Witness Neely responded that the contribution should be based on "the current configuration of the system and represent the current avoided capacity value." (Tr. at 153.4:15-18.) Witness Neely also responded that the Commission had rejected Witness Beach's approach in last year's fuel docket and Docket 2019-182-E. (Tr. at 153.5:3-7.) However, at the hearing, Witness Neely read the Commission Conclusion from Order No. 2021-569 stating that it "adopt[ed] Witness Beach's recommendation that forecasts of capacity costs take into consideration the hours in which utility loads are likely to peak and when generation is most needed." (Tr. at 207:14-23 (quoting Order No. 2021-569 at 38).)

Commission Conclusions

The Commission is persuaded that DESC's avoided generation capacity calculation underestimates the benefit by failing to account for its near-term capacity needs reflected in the combustion turbine replacement plan and giving undue preference to utility scale solar. As clearly stated in its 2021 IRP Update, DESC's has plans to replace ten aging combustion turbines to serve an *immediate* capacity need, as well as provide the Company's system with other capabilities. These plans clearly have a bearing on the near- and long-term avoided capacity value of existing rooftop solar on DESC's system. Witness Neely's suggestion that in-kind replacements cannot be avoided is untenable and would lead to the absurd conclusion that a utility could avoid ever having to calculate avoided

capacity by simply replacing all its retiring generation units with equivalent resources¹; this represents a fundamental misunderstanding of the purpose of calculating avoided capacity, which is not to determine whether clean energy resources could be used to avoid a *specific* generation project or resource (in this case, the CT replacement units), but rather to evaluate whether the utility's need to build new *capacity* is *avoidable*. The fact that the Company has sought and received approval to build new CT units does not mean that clean energy resources did not or could not have been used to prevent the need for some or all of the capacity function that those units will provide.

In addition, DESC failed to provide sufficient evidence in its pre-filed testimony or at the hearing that its calculation of solar capacity contribution takes into consideration the hours in which utility loads are likely to peak and when generation is most needed, as required by Order No. 2021-569. The methodology that DESC put forth as supporting its solar capacity contribution value in pre-filed testimony was taken from a portion of Order No. 2021-569 that does not apply to the avoided capacity value NEM Methodology; specifically, the directive quoted in Witness Neely's testimony was made with respect to how a utility may run a cost of service study. *See* Order No. 2021-569 at 10-11. Because Witness Beach affirmatively demonstrated his compliance with the methodology set out in Order No. 2021-569, we adopt his proposed avoided capacity value.

4. *Avoided Transmission & Distribution Capacity*

Summary of Evidence

¹ In this instance, we would note that DESC is not replacing the retiring CT units with units that are entirely the same; the CT replacement units are newer, more efficient, and will result in a net addition of capacity to the Company's system.

In support of DESC's proposed zero value for avoided transmission and distribution ("T&D") capacity in the Current Period, DESC Witness Neely provided only that the distributed resources "do not avoided transmission or distribution capacity." (Tr. at 145.11:1-6.) For the 20-year Period, Witness Neely explained that the proposed value was based on the average annual T&D costs in the five-year budget that could be avoided and the average annual load growth. (Tr. at 145.11:7-21.) Witness Neely further noted that, in accordance with Order No. 2021-569, the Company had filed plans for improving its ability to estimate T&D avoided costs in the generic docket. (Tr. at 145.13:13-14.)

ORS Witness Gretchen Pool found DESC's proposed value of zero to be reasonable, stating that ORS was waiting to see the Company's granular data as it becomes available in the stakeholder process set for this fall on the Company's T&D and marginal line loss plan. (Tr. at 316:4-16.) At the hearing, Witness Pool stated that she was familiar with testimony submitted by ORS Witness Brian Horii in the Generic NEM docket, where Mr. Horii stated that, in the absence of granular T&D data, it was more appropriate to use an average system value than a zero value to account for this benefit. (Tr. at 314:24-315:12, 317:5-15.) Witness Pool also stated she was familiar with Witness Horii's testimony in that docket that there are "myriad" examples of jurisdictions that manage to derive an actual value for avoided T&D. (Tr. at 314:18-23.) Nevertheless, Witness Pool stated that ORS believed it was reasonable to set a zero value for avoided T&D because Order No. 2021-569 allowed the utility flexibility in calculating this value. (Tr. at 316:4-16.) Consistent with ORS Witness Horii's testimony in the Generic NEM Docket, CCL/SACE Witness Beach testified that DESC's continued practice of setting the avoided T&D cost at zero ignores the fact that existing solar on its system is reducing the

Company's T&D costs now by reducing peak loads on the DESC T&D system. (Tr. at 302.21:11-12, 302.24:13-16.) He also questioned the logic of DESC's view that avoided T&D costs are zero today but materialize in the next five years and highlighted that DESC's approach to determine "avoidable" T&D costs required an arbitrary segregation of which projects are capacity-related and which are not. (Tr. at 302.24:13-16, 25:12-23.)

Witness Beach proposed alternative avoided T&D calculations using the National Economic Research Associates ("NERA") regression method, a long-recognized approach used by other U.S. utilities to determine marginal transmission and distribution capacity costs that vary with changes. (Tr. at 302.22:4-7.) This approach evaluates the long-term correlation between peak demand and load growth on the DESC system and the utility's investments in T&D, over a 15-year period from 2009 to 2025. (Tr. at 302.22:7-302.24:10.) As such, the NERA method captures how the utility's T&D investments change as a function of peak demand and reflects the reality that, to the extent that DERs can reduce DESC's peak demand, DERs will avoid capacity-related T&D costs. (Tr. at 298:16-22.)

In rebuttal, Witness Neely stated that Witness Beach's alternative values were overstated because he uses costs in his analysis, such as lifecycle replacement and repair costs, that are not related to load growth. (Tr. at 153.6:10-153.7:7.) In DESC's view, there is no avoided T&D in the Current Period because there was no projected load growth in the one-year period. (Tr. at 153.8:7-10.) At the hearing, though, Witness Neely admitted that the energy that customer-generators consume behind the meter during peak periods avoids higher loads being placed on the Company's T&D system, and more specifically that "even over a year where there isn't load growth, DERs are still working to avoid future costs to

the company.” (Tr. at 167:18-23, 169:16-21.) As a result, he “theoretically” agreed that even during the one-year Current Period, DERs may benefit the Company’s T&D infrastructure by preventing or deferring the need for upgrades or maintenance. (Tr. at 171:2-8.) Witness Neely stated he was not aware of the methods used by other utilities to calculate avoided T&D and thus did not know whether DESC’s use of one year of load data was a method accepted across the utility industry. (Tr. at 176:21–177:18.) Witness Neely also asserted for the first time at the hearing, and without explanation, that these T&D capacity benefits were captured in the separate avoided energy component under the NEM Methodology. (Tr. at 167:18-24, 169:16-21.)

Witness Neely recalled that the Commission’s Order found that “there are techniques accepted across the utility industry for recognizing the avoided [T&D] values of DER” and stated that it was “appropriate to require such a technique or method to quantify the long-term impacts of the aggregate customer-generator.” (Tr. at 164:6-20 (quoting Order No. 2021-569 at 13).) However, he maintained that DESC’s approach which resulted in a zero value for the Current Period was appropriate. (Tr. at 175:12–176:1.) When counsel asked whether DESC reviewed or considered employing a non-zero value for avoided T&D over the review period, Witness Neely stated that the Company believed its method, which it has used “for a number of years” and is “accustomed to” met the requirements of the Commission’s 2021 Order. (Tr. at 173:12-19.) Further, the Company “believed [it had] done the best job at calculating the avoided T&D costs on [its] system.” (Tr. 177:10-17.) But Witness Neely was also “not aware of the methods used by other utilities” to calculate this benefit. (Tr. at 176:21–177:9.)

Commission Conclusions

Based on the Company's pre-filed testimony and hearing testimony, the Commission is concerned that DESC did not use best efforts or best practices to populate the avoided T&D capacity values. Witness Neely's assertion that DESC used the method it always had used to value the T&D benefit—a method which has always resulted in a zero value—suggests that DESC did not attempt to fully comply with the expectations and specific directives in Order No. 2021-569. Moreover, DESC's view that its method is "best practice" is unpersuasive given that the Company did not review alternative methods, as Witness Neely indicated during cross examination. The Company's failure to review the methods used in "myriad jurisdictions" to quantify avoided T&D confirms that it did not use "best efforts" to populate this value. Though the Company's T&D and marginal line loss may provide more granular data that could result in an updated value when the plan is completed, DESC did not provide any evidence as to why it could not use an alternative method to estimate a non-zero value in the interim to avoid imposing undue costs on ratepayers. While Order No. 2021-569 allows utilities flexibility to employ methodologies that "reflect the current state of available data," this flexibility does not allow the utility to simply set the value for avoided T&D at zero while it gathers more data; rather, if granular data is not available, the utility should use one of the methodologies available to estimate avoided T&D based on the data it has available.

More specifically, DESC has failed to meet the burden established in Order No. 2021-569 to justify the proposed zero value for the Current Period. Witness Neely's unsupported claim that distributed solar "does not avoid transmission or distribution capacity" does not provide the Commission or other interested parties with any assurance that DESC has attempted to populate this value. Witness Neely was unable to cite any other

jurisdiction that looks at load growth over a one-year period additional assertion that there is no value because there is no load growth over the Current Period does not justify assigning a zero value to such a well-documented benefit. This assertion also suggests that DESC failed to consider DER load impacts apart from the Company's forecasted load, and thus to fully consider the benefits that DERs provide to the T&D system.

With respect to the 20-year avoided T&D capacity value, while DESC estimated a value for this component, we are concerned based on the testimony presented by Witness Beach that the Company has arbitrarily segmented capacity-related T&D costs from other T&D expenditures and taken an overly narrow view that avoided T&D costs relate only to load growth and not the Company's peak demand. In contrast, Witness Beach's proposed alternative T&D value for Current and 20-year Period is supported with an in-depth methodological explanation and was calculated using the industry-accepted NERA regression method. The Commission is satisfied that this approach accounts for how utility's T&D investments change as a function of peak demand and load growth.

5. *Avoided Costs of CO₂ Emissions*

Summary of Evidence

DESC Witness Neely testified that the value of avoided costs of CO₂ emissions was set to zero because currently there are no state or federal laws or regulations restricting the emissions of CO₂. (Tr. at 145.14:8-11.) CCL/SACE Witness Beach noted in response that despite the absence of regulations, DESC and other South Carolina utilities are actively planning to reduce their carbon emissions to mitigate the risk of having to take more drastic and likely more expensive actions to reduce emissions in the future; indeed, DESC

acknowledges in its 2021 IRP update that reducing carbon emissions is already a significant driver of its current planning and spending. (Tr. at 302.26.)

At the hearing, Witness Neely noted that the solar on DESC's system was "very valuable to help with the energy because it can help us meet our CO₂ emissions goals." (Tr. at 227:7-21.)

Commission Conclusions

The Commission is persuaded by testimony in this proceeding that the Company is currently spending money to meet its corporate emissions target to reduce carbon emissions by half by 2020. In future proceedings, the Company should attempt to quantify the extent to which solar PV displaces the need for additional investment to reach its corporate carbon goals.

6. *Fuel Hedge*

Summary of Evidence

The Company proposes to set the Fuel Hedge value for zero because, as DESC Witness Neely explained, DESC "does not hedge fuels for electric generation." (Tr. at 145.14:8-11.) Witness Neely confirmed at the hearing that the Company felt this approach was justified under Order No. 2021-569, which states that "if the electrical utility engaged in financial hedging activities, then [it] shall keep sufficient data to determine the prudence of those costs." (Tr. at 212:1-13 (quoting Order No. 2021-569 at 41).). However, Witness Neely agreed that the Commission's Generic NEM Order approved the continued use of the value stack from Order No. 2015-194, and specifically that "the definition of the 11 components are still the same." (Tr. at 213:2-7.) The NEM Methodology in Order No. 2015-194, however, defines the "fuel hedge" component and states that it "includes the

increases and decreases in....the cost or benefit associated with serving a portion of its load with a resource that has less volatility due to fuel costs than certain fossil fuels. (Tr. at 213:13-23 (quoting Order No. 2021-569, Ex. 1 at 2).) Witness Neely admitted at the hearing that rooftop solar resources “served a portion of the Company’s load” but would not agree that solar does not use fuel and thus is not susceptible to volatility in fuel costs. (Tr. at 216:24–217:14.) The Company did not attempt to calculate “the costs or benefits of serving a portion of its load that has less volatility due to fuel costs than certain fossil fuels” when determining the “fuel hedge” component under the NEM Methodology, but rather Witness Neely asserted for the first time at the hearing that “any benefits that the DER customers provided to the system will be captured in the avoided energy cost” benefit instead. (Tr. at 217, 218:19–219:22.)

In contrast, CCL/SACE Witness Beach highlighted the hedging benefit that distributed solar provides to the system, explaining that renewable generation, such as solar PV, reduces a utility’s use of natural gas over solar PV’s 20-year economic life, and thus decreases the exposure of ratepayers to the volatility and periodic spikes in natural gas. (Tr. at 302.28:5-17, 302.30:3-4.) As a result, ratepayers do realize a significant hedge value to any deployment on the DESC system of renewable resources that have zero fuel costs. (Tr. at 302.29:3-5.) He proposed a value to quantify the fuel hedge benefit of solar PV over the current and 20-year period using a method developed for the Maine Public Utilities Commission; this approach quantifies the benefits of reducing uncertainty in the costs for fuel that solar displaces by recognizing that one could contract for future natural gas supplies today, and then set aside in risk-free investments the money needed to buy that gas in the future. (Tr. at 302.30:10–302.31:22.) The additional cost of this approach

compared to purchasing gas on a “pay as you go” basis (and using the money saved for alternative investments) is the benefit of reducing the uncertainty in the costs for the fuel that solar PV displaces. *Id.*

Witness Beach observed that solar’s role in reducing the impact of fossil fuel volatility by serving a portion of DESC’s load was underscored in recent months, during which current events have caused a worldwide spike in gas prices; for DESC, this volatility has caused a 26% increase in the fuel rider, with this increase constituting the lion’s share of the DESC’s proposed 6% increase in overall electric rates for residential customers. (Tr. at 302.28:15-21.) The proposed increase to the rider would have been even greater absent the utility’s non-fossil generation. (Tr. at 302.29:1-5.)

Multiple DESC witnesses affirmed that the recent volatility and spikes in gas prices were driving DESC’s proposed increase to the fuel rider. DESC Witness Rooks described the balance for which DESC is seeking recovery as the “highest that [he] ha[s] ever seen it” as a result of recent fuel spikes. (Tr. at 277:11 – 278:17.) In fact, were it not for a recent settlement with Toshiba which resulted in a bill credit, residential customers would be seeing a \$10.40 increase in bills for a 1,000-kilowatt home; even with the Toshiba credit, those customers will still see a \$7.40 increase. (Tr. at 275:24 – 276:16.) DESC Witness Rose Jackson, who submitted testimony on the Company’s gas purchasing and policies, agreed that recent price spikes had driven an increase in the rider, and that DESC ratepayers would bear an increased cost burden associated with those increased gas prices. (Tr. at 109:2-20.) Witness Jackson highlighted a range of domestic factors in testimony that could cause the type of short-term volatility seen in recent months, and at the hearing added that there are also international impacts as the global demand for natural gas changes. (Tr. at

106:1-17.) Witness Jackson expected gas prices to remain high; whereas the average price over the review period was \$3.77, she forecasted that prices would remain above \$6 for the remainder about 2022, noting: “we are in an unprecedented time with global forces, that we cannot control, that’s impacting pricing.” (Tr. at 105:12-25.)

Still, and despite the fact that gas plants provided 47% of DESC’s generation over the review period, Witness Jackson emphasized that additional gas would have to be built in the near future to support the development of renewables. (Tr. at 102:16–103:10.) Commissioner Ervin noted she may be right “if the price doesn’t go sky-high due to unforeseen circumstances, and [] we had some of those circumstances lately”; he urged DESC to weigh all resource options “because we need a diversified portfolio.” (Tr. at 124:3-20.) Witness Jackson agreed that “diversity is the key” (Tr. at 124:17-23.) Likewise, Witness Neely observed that “[a] diversified fuel portfolio is a really good thing” and that “we can protect ourselves from increases in fuel costs through the fuel diversity.” (Tr. at 231:20–232:8.)

Commission Conclusions

The Commission is persuaded that ratepayers realize a significant “fuel hedge” value to any deployment on the DESC system of renewable resources that have zero fuel costs, and it is unreasonable of DESC to continue to assign this component a zero value merely because the Company does not engage in financial hedging. Distributed solar reduces a utility’s use of natural gas over solar PV’s 20-year economic life, and thus decreases the exposure of ratepayers to the volatility and periodic spikes in natural gas. As we have seen in this review period, this value is significant and certainly not zero as DESC proposes over the Current and 20-year Period. Dramatic gas price spikes over the review

period have driven a substantial increase to the proposed rider; this experience illustrates how the cost burden of increased gas prices is passed directly on to ratepayers through the annual fuel rider. Unfortunately, as DESC witnesses acknowledge, gas prices show no sign of decreasing and may even increase further. Ratepayers will continue to bear those increased costs in future fuel proceedings, especially given that almost half of DESC's generation is provided by gas.

Witness Neely's argument that the fuel hedge value is captured in avoided energy costs is not persuasive. The cost of energy, and thus avoided energy, will reflect the aggregate cost of the Company's various resources over the review period. But the fuel hedge component is not intended to capture the avoided energy cost over the review period—there is separate component for that benefit. Rather, the fuel hedge benefit, even in the absence of financial hedging, shall capture “the costs or benefits of serving a portion of its load that has less volatility due to fuel costs than certain fossil fuels,” as set out in the original NEM Methodology. This is exactly the physical hedging benefit provided by distributed solar. Witness Beach's alternative fuel hedge value calculates the physical hedge value of renewable solar generation by accounting for the benefits of reducing uncertainty in the costs for fuel that solar displaces through a well-reasoned analysis of current prices and price forecasts.

7. Utility Integration & Interconnection Costs

Summary of Evidence

DESC Witness Neely testified that the Company set the value for the integration charge at \$1.80/MWH (\$0.0018/kWh), the integration charge approved in DESC's 2021 avoided cost proceeding (Docket No. 2021-88-E). CCL/SACE Witness Beach filed direct

testimony recommending that the integration charge be reduced by 50% to comply with Order No. 2021-569's requirement that integration charges only apply to exported power from solar customer. (Tr. at 302.32:1-9.) However, Witness Neely explained that the Company only applied these integration costs to exported power for customer-sited DER. (Tr. at 145.14:12-19.)

Commission Conclusions

In calculating the value of solar, the Company is only applying the integration charge approved in its last avoided cost proceeding to power that is exported by customer-generators. As such, the Company's approach is reasonable.

V. ORDERING PARAGRAPHS

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

1. DESC shall recalculate its DER incentive proposed in this docket using the values proposed in CCL/SACE Witness Beach's testimony for:
 - a. Avoided Energy
 - b. Avoided Generation Capacity
 - c. Energy Losses/Line Losses
 - d. Avoided Transmission & Distribution Capacity
 - e. Fuel Hedge
2. When employing the NEM Methodology from Order No. 2015-194, as modified by Order No. 2021-569, in future fuel cost proceedings,
 - a. DESC shall use best practices and best efforts to populate all values in the NEM methodology value stack with a non-zero value;
 - b. DESC shall apply the approved methodology in Order No. 2021-569 to calculate the avoided energy and avoided capacity components;

- c. DESC shall modify its approach to estimate energy losses/line losses in the manner set out in CCL/SACE Witness Beach's direct testimony to avoid underestimation in the interim, until more granular data is available;
- d. DESC shall, even in the absence of granular data, conduct a survey of industry-standard methodologies to quantify the avoided transmission and distribution capacity value, and employ an accepted approach to calculate positive value for this component for the Current and 20-year Period.
- e. DESC shall calculate a fuel hedge value that reflects the physical hedging benefit that distributed solar provides to the system by reducing a utility's fossil fuel usage over solar PV's 20-year economic life, and thus decreasing the exposure of ratepayers to the volatility of fossil fuel prices.

BY ORDER OF THE COMMISSION:

Justin T. Williams, Chairman
Public Service Commission of
South Carolina

I hereby certify that the parties listed below have been served via first class U.S. Mail or electronic mail with a copy of the *Partial Proposed Order* of the South Carolina Coastal Conservation League and the Southern Alliance for Clean Energy.

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This 20th day of April 2022.

s/Kate Lee Mixson